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Kootenai

SPREAD CREEK CONTROL PROJECT
1944

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SPREAD CREEK CONTROL PROJECT
KOOTENAI NATIONAL FOREST
1944

The stand in which this control project was conducted, is located on Spread Creek, a tributary of the Yaak River in extreme northwestern Montana. Control was limited to an area of about 1000 acres containing mature western white pine within which an epidemic condition of the mountain pine beetle existed on about 360 acres and scattered infestation over the remainder of the area.

Control operations began May 16 with training of crews. The organization consisted of two crews of three men each. Four of the six men were woodsmen previously employed by the Forest Service but the other two were inexperienced boys. The latter proved to be satisfactory workers but their lack of woods experience was a handicap in the type of work involved.

The project was terminated on June 5 after 13½ days of field work for treating 281 trees. Adverse weather caused the loss of five days and handicapped the work more or less at other times during the 21-day period from May 16 to June 5.

In general, the infested trees were in groups, only 29 of the 281 treated being single trees. Of the latter, 16 were in or around the edge of the burn and in many cases so lightly infested as to indicate a potential emergence less than the number of insects that had attacked the tree. In the burn and around its borders, attacked lodgepole pine were found as quite lightly infested single trees. In general, that was also true of infested lodgepole pine found in the southeastern part of the area. In contrast, those found in the northwestern part of the area were very heavily infested and usually in association with infested western white pine. Lodgepole pine comprised about 10 percent of the total number of trees treated.

Growth of the mountain pine beetle brood seems to have been delayed by the cool season, as no callow adults developing from overwintering larvae during the current season were noted even up to June 5 and the percent of pupae observed was never in excess of about 15 percent of the total brood present. Overwintering new adults had not emerged up to the same date, judging by the failure to observe any new attacks. A number of Engelmann spruce were found attacked by the mountain pine beetle but that host seems to have offered poor developmental conditions as only two contained any living brood.

The spray used on this project was that left over from the control project conducted on the Coeur d'Alene Forest in the spring of 1941, supplemented by a larger amount mixed on the project from orthodichlorobenzene also left over from the 1941 control project and Diesel oil obtained during the current season by the Kootenai National Forest.

Transportation of spray and equipment in the field was by pickup truck to the nearest point of use and from there by hand in 5-gallon cans. Over much of the project, this was not a difficult problem. For the infestation in the northwestern part of the area, however, it required carrying the spray nearly a mile up steep trails or skid roads for most of the distance and over more or less windfall to the infested groups. This required so much energy as to be questionable practice in

view of the high cost of man-power. The writer believes at least one horse should have been used on the project to transport spray for distances in excess of one-half mile.

Spotting of infested trees was done by the Forest Insect Division representative on the project. Bark-beetle-infested windfalls were fewer than expected. Trees windthrown in 1942 contained, as a general rule, too few insects to justify treating. Those windthrown in 1943 were often heavily infested and such trees were treated.

The cutting of treated trees in this area into 16-foot logs probably lowered the man-day output slightly but the procedure was justified in the greater ease of rolling in connection with spraying.

The promise of an operator to salvage much of this treated material marks a decided advance in the utilization of timber ordinarily lost tomthe lumber market. It also reduces the cost of control operations if income can be derived from the sale of such materials.

A recapitulation of the data for the project is given in the following summary:

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Number of trees treated	281
Average D.B.H. of trees treated	15.5"
Average treated length above stump	63.5'
Average treated length of stump	2.0'
Average total treated length	65.5'
Average diameter at end of treated length	6.6"
Average sq. ft. of bark surface treated in felled portio of tree	195.6
Average sq. ft. of bark surface treated in stump 2' high and 19.5" in diameter	10.2
Average total sq. ft. of bark surface treated per tree	205.8
Average gallons of spray used per tree	2.11
Average sq. ft. of bark surface treated per gallon of spray	97.5
Man-days spent in actual treating	81
Trees treated per effective man-day	3.47

An examination of the control work in late June revealed complete mortality whereever the spray had been properly applied. However, on many logs the spray had not been properly applied. Areas were missed, the underside of logs had been either too lightly sprayed or not treated at all, and some logs had not been turned during the process of spraying. In one case a log had not even been treated. Both crews had failed to properly apply the spray.

Reinfestation of the area can be expected from insects emerging from the bark surface which has been missed or improperly sprayed. An examination later in the season should reveal the amount.

Archie S. Gibson